



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,691	01/05/2007	Jean-Raphael Bezal	PF030152	4984
24498	7590	04/27/2011		
Robert D. Shedd, Patent Operations THOMSON Licensing LLC P.O. Box 5312 Princeton, NJ 08543-5312			EXAMINER SIM, YONG H	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 04/27/2011	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,691	Applicant(s) BEZAL ET AL.	
	Examiner YONG SIM	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 recites the limitation "the first and second connection lines" in line 5.

There is insufficient antecedent basis for this limitation in the claim.

For the purpose of art rejection, "the first and second connection lines" will be construed as "a first and second connection lines."

3. Claim 2 further recites the limitation "the direction" in line 14. There is insufficient antecedent basis for this limitation in the claim.

For the purpose of art rejection, "the direction" will be construed as "a direction."

4. Claim 5 recites the limitation "said high sustain voltage" in line 3. There is insufficient antecedent basis for this limitation in the claim.

For the purpose of art rejection, "said high sustain voltage" will be construed as "a high sustain voltage."

5. Claim 6 recites the limitation "the on state" in line 5. There is insufficient antecedent basis for this limitation in the claim.

For the purpose of art rejection, "the on state" will be construed as "an on state."

6. Claim 8 recites the limitation "said second diode" in line 3. There is insufficient antecedent basis for this limitation in the claim.

For the purpose of art rejection, "said second diode" will be construed as "a second diode."

7. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 10 recites the limitation "the switching means for isolating the first connection line from the sustain means of said driver device during the row address phase of the relevant block is a diode" in lines 2 – 4. There diode cannot be a switching means.

For the purpose of art rejection, "is a diode" will be construed as "comprises the second diode."

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2629

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Awamoto (US 6,369,514 B2).

Regarding claim 1, Awamoto teaches Device for driving a plasma display panel having a plurality of cells arranged in rows and, the rows of cells being distributed in a plurality of block of lines columns (See Fig. 1. Y, X and A. Also see Fig. 2. See Fig. 8 for blocks of lines of columns 781.), said device comprising row address means for selectively addressing the display cell rows within the blocks and creating, where required, in cooperation with means for selectively applying data voltages to the display columns, an electrical discharge inside the cell disposed at the intersection of the row and column selected during an address phase (Col. 8, lines 20 – 27; “The Y driver includes a scanning circuit and a common driver. The address driver controls the potential of the total m of third electrodes A in accordance with the subfield data Dsf.”), and sustain means (791 “sustain circuit” Fig. 8) for sustaining the electrical discharges inside said cell during a sustain phase immediately following the address phase (See Col. 1, lines 51 – 56; “when increasing the sustaining voltage Vs, the cell voltage exceeds the discharge start voltage .. so that the surface discharge occurs ...” Also see Fig. 11 for the sustain period immediately following the address period. Col. 8, lines 62 – 67; “In the display, the period of one subfield includes a reparation period TR, an address period TA and a sustaining period TS in the same way as the conventional

Art Unit: 2629

driving method (see Fig. 11)."), wherein said in that said row address means comprise row address means for addressing successively the blocks of rows by applying a first voltage to the cells of the selected block (Col. 9, lines 10 – 15; "In the first half ... the selected row is biased to a selection potential V_{ya1} .") and a second voltage to the cells of the other blocks, said second voltage being greater than the first voltage (Col. 9, lines 10 – 15; "The second electrodes that are not selected in this period are all biased to a second non-selection potential V_{ya3} ... $V_{aa} < V_{ya3} < V_{ya2} < V_{ya1}$ is satisfied.") and said row address means and/or sustain means are capable of allowing a bi-directional current to flow within the cells of the display during said address and/or sustain phases (Col. 10, line 53 – Col. 11, line 4; "supplies the sustaining pulse to the positive polarity and the power source terminals SU, SD when being biased to the negative potential ... all the second electrodes $Y_{(n/2)+1} - Y_n$ are connected to the ground bi-directional so as to be the ground potential.").

Regarding claim 11, Awamoto teaches a plasma display panel wherein it comprises a driver device according to claim 1 (See Col 7, lines 46 – 65).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. **Claims 2 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Awamoto.**

Regarding claim 2, as best understood by Examiner, Awamoto teaches Device according to claim 1, wherein the row address means (78 “scanning circuit” Fig. 8) for each block of rows comprises: at least one row driver circuit for each of the blocks of rows (781 “scanning drivers” Fig. 8) connected between the first and second connection lines (See Fig. 1, SU is a first connection lines and SD is a second connection lines.) and designed to apply, during an address phase specific to said block of rows, the potential of one of said first and second connection lines to a first electrode of the cells of a plurality of rows of the block (Col. 10, lines 58 – 63; “... the sustaining circuit that supplies the sustaining pulse of the positive polarity and the power source terminals SU, SD when being biased to the negative potential.”), a first switch (Q6₁ “switch” Fig. 8) for selectively applying an address voltage to the second connection line during the address phase (See Fig. 8), a first diode connected in series with a second switch for applying said first voltage to the first connection line during the address phase

Art Unit: 2629

(See Fig. 8. a diode is connected to Q5₁ to apply the first potential Vya1 to the first connection lines SU.), said diode being oriented so as to allow a current to flow in the direction of the first connection line (See Fig. 8), a switching means for isolating said first connection line from the sustain means of said driver device during the row address phase of the relevant block (Col. 10, lines 65 – 67; “a switch is turned on for flowing the current to the ground in the sustaining circuit ...”), and a third switch (Q8₁ “switch” Fig. 8) for applying said second voltage to said first connection line during the address phases specific to the other blocks (See Fig. 8 and Col. 10, lines 53 – 67).

But Awamoto does not expressly describe a capacitor for connecting the cathode of the first diode to the second connection line.

However, Examiner takes official notice that it is well known in the art to include a capacitor for connecting a cathode of a diode to a connection line.

Therefore, it would have been obvious to a person having ordinary skill in the art to incorporate the idea of having a capacitor connected to a cathode of a diode into the first diode as taught by Awamoto yield a device with addressing means comprising a diode that is connected to a capacitor at the cathode to avoid applying over voltage to the address lines.

Regarding claim 3, Awamoto as modified above teaches the device according to claim 2, wherein said third switch is common to the address means of the blocks of rows (See Fig. 8).

Regarding claim 4, Awamoto as modified above teaches the device according to claim 3, wherein the switching means is a switch connected between the sustain means of the device and said first connection line, which switch is open during the row address phase of the relevant block (See Fig. 13 for the detailed switch connection of sustaining circuits. Also see Col. 10, lines 53 – 67.).

Regarding claim 5, as best understood by Examiner, Awamoto teaches device according to claim 2, wherein said second voltage is equal to a high sustain voltage (A high sustain voltage can be any voltage that is equal to the second voltage which is V_{ya3}).

Regarding claim 6, as best understood by Examiner, Awamoto as modified above teaches a device according to claim 2, wherein the sustain means comprise: third and fourth switches (See Fig. 13 for the third switch which is connected to SU and the fourth switch which is connected to SD) for selectively applying a high sustain voltage and a low sustain voltage to said first connection line of the blocks when the switching means of said blocks is in the on state (Col. 10, lines 58 – 63; "... the sustaining circuit that supplies the sustaining pulse of the positive polarity and the power source terminals SU, SD when being biased to the negative potential.), fifth and sixth switches for selectively applying said high sustain voltage and said low sustain voltage to a second electrode of the cells of the plurality of rows selected by said row driver circuit (See Fig. 8, Fig. 8 shows two identical sustaining circuits which comprises fifth and sixth switches.

Art Unit: 2629

Also see Col. 10, lines 58 - 63), said third and sixth switches on the one hand, and said fourth and fifth transistors on the other, being controlled in an identical manner (Since the sustaining circuits are equivalent, they will be controlled in an identical manner.).

Regarding claim 7, Awamoto as modified above teaches a device according to claim 6, wherein the sustain means additionally comprise: a second diode connected in series with said third switch and oriented so as to allow a current to flow into the first connection line of the blocks when the switching means of said blocks is in the on state (See Fig. 8, a diode is serially connected between the sustaining circuit and a switch to allow a current to flow in the first connection line SU) , and third and fourth diodes connected in parallel with the third and fourth switches respectively, and fifth and sixth diodes connected in parallel with the fifth and sixth switches, respectively (See third and fourth diodes within the sustaining circuit 790 in Fig. 13. The fifth and sixth diodes would be connected in the same manner in the second sustaining circuit as shown in Fig. 8).

Regarding claim 8, as best understood by Examiner, Awamoto teaches a device according to claim 3, wherein said third switch is connected in parallel with a second diode (See Fig. 8 for the parallel configuration.).

Regarding claim 9, Awamoto as modified above, teaches a device according to claim 6, wherein the sustain means additionally comprise a fifth switch inserted between

Art Unit: 2629

the first and second connection lines of each block, which switch is open during the row address phase of the relevant block and closed during the sustain phase (See Fig. 13. The sustaining circuit shows a power recovering circuit comprising switches which are inserted between the first and second connection lines which would be open during the row address phase.).

Regarding claim 10, as best understood by Examiner, Awamoto, as modified above, teaches a device according to claim 9, wherein the switching means for isolating the first connection line from the sustain means of said driver device during the row address phase of the relevant block comprises the second diode connected between the sustain means of the device and said first connection line, which diode is oriented so as not to allow a current to flow in the direction of the first connection line (See Fig. 8. the second diode is connected between the sustain means and the first connection line which would not allow a current to flow in the direction towards the sustaining circuit.)and in that the fifth switch is inserted between the sustain means of the device and said second connection line (See Fig. 13, the fifth switch is inserted between the sustain means of the device and the second connection line SD).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YONG SIM whose telephone number is (571)270-1189.

Art Unit: 2629

The examiner can normally be reached on Monday - Friday (Alternate Fridays off) 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YONG SIM/
Examiner, Art Unit 2629
4/24/2011